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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,691	11/01/2000	Seste Dell' Aera	679P01US	9894
20779	7590	01/26/2005	EXAMINER	
SHAPIRO COHEN P.O. BOX 3440 STATION D OTTAWA, ON K1P6P1 CANADA			LY, NGHI H	
			ART UNIT	PAPER NUMBER
			2686	
DATE MAILED: 01/26/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/702,691	DELL' AERA, SESTE	
	Examiner	Art Unit	
	Nghi H. Ly	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17, 19-24 and 27-32 is/are rejected.
- 7) ☒ Claim(s) 18, 25 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 17, 19-20, 23-24, 27, 30 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Sunter et al (US 6,396,889).

Regarding claims 17, 23, and 27, Sunter teaches a method of calibrating a radio having a frequency source which reproduces a first signal having a first frequency by multiplying a second signal having an original frequency by a multiplier value (see fig.5, the multiplexer 34 with two inputs 14 and 42), the method comprising:

- a) determining the original frequency (see fig.5, connection 14 for the Clock Source),
- b) utilizing the original frequency to determine a corrected multiplier value (see fig.5, the connection 42 and multiplexer),
- c) producing an output signal having an output frequency approximately equal to a desired frequency by adjusting the multiplier value to the corrected multiplier value (see the output from Frequency Measurement 38, and see fig.5, the feedback from the Digital Result to the controller 32 for controlling the controller 32).

Regarding claim 19, Sunter further teaches the step b) the dividing the desired frequency by the original frequency to obtain the corrected multiplier value (see column 12, lines 22-30 and see fig.15).

Regarding claim 20, Sunter further teaches including the step of storing the original frequency in storage means (see column 6, lines 53-55).

Regarding claim 24, Sunter further teaches the step ab) further includes a step chosen from the group comprising:

ab1) incrementing the multiplier value by a preprogrammed value to obtain the corrected multiplier value if the preliminary frequency is lesser than the desired frequency (see fig.5, the output 42 of the controller 32 is used to control the multiplexer 34 so that the output could be maintained at a desirable level. Therefore, the teaching of Sunter inherently teaches Applicant's claimed limitation),

ab2) decrementing the multiplier value by a preprogrammed value to obtain the corrected multiplier value if the preliminary frequency is greater than the desired frequency (see fig.5, the output 42 of the controller 32 is used to control the multiplexer 34 so that the output could be maintained at a desirable level. Therefore, the teaching of Sunter inherently teaches Applicant's claimed limitation),

ab3) utilizing the multiplier value as the corrected multiplier value if the preliminary frequency is approximately equal to the desired frequency (see fig.5, the output 42 of the controller 32 is used to control the multiplexer 34 so that the output could be maintained at a desirable level. Therefore, the teaching of Sunter inherently teaches Applicant's claimed limitation).

Regarding claim 30, Sunter further teaches the frequency source, the controller, and the frequency measurement device are implemented on a single application specific integrated circuit (column 1, lines 41-47 and column 4, lines 10-28, see *"integrated circuits"*).

Regarding claim 32, Sunter further teaches the frequency measurement device is connected at the output of the frequency source to measure the output frequency of the signal (see fig.5, the PLL Output is measured by the Frequency Measurement 38).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 21, 22, 28, 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sunter et al (US 6,396,889).

Regarding claims 21, 22, 28, 29 and 31, Sunter teaches claims 17, 23 and 27, *instead of* the first frequency is generated using a high resolution frequency synthesizer *or* the second signal is provided by a crystal oscillating at the original frequency *or* the frequency source is chosen from the group comprising: a high resolution frequency synthesizer (a radio) *or* the controller is chosen from the group comprising: a general purpose multiprocessor (a microcontroller, a general purpose personal computer) *or* storing the input frequency *or* storing the value of the original frequency in a storage means.

However, using the first frequency is generated using a high resolution frequency synthesizer *or* the second signal is provided by a crystal oscillating at the original frequency *or* the frequency source is chosen from the group comprising: a high resolution frequency synthesizer (a radio) *or* the controller is chosen from the group comprising: a general purpose multiprocessor (a microcontroller, a general purpose personal computer) *or* storing the input frequency *or* storing the value of the original frequency in a storage means is known in the art.

Therefore, it would have been obvious to one of the ordinary skill in the art to modify the above teaching of Sunter as claimed, in order to improve the first frequency is generated using a high resolution frequency synthesizer *or* the second signal is provided by a crystal oscillating at the original frequency *or* the frequency source is chosen from the group comprising: a high resolution frequency synthesizer (a radio) *or* the controller is chosen from the group comprising: a general purpose multiprocessor (a microcontroller, a general purpose personal computer) *or* storing the input frequency or storing the value of the original frequency in a storage mean is known in the art.

Allowable Subject Matter

5. Claims 18, 25 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 18, Sunter teaches claim 17 wherein step a) further includes the steps of: a1) measuring the first frequency (see fig.5, Frequency Measurement 38 and the output 41). Sunter fails to teach a2) dividing the first frequency by the multiplier value to obtain the original frequency.

Regarding claim 25, Sunter teaches claim 23. Sunter fails to teach the step of obtaining the original frequency by dividing the final frequency by the corrected multiplier value.

Response to Arguments

6. Applicant's arguments filed 07/19/2004 have been fully considered but they are not persuasive.

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On page 7 of applicant's remarks, applicant argues that Sunter does not disclose "... a frequency source which produces a first signal having a first frequency by multiplying a second signal having an original frequency by a multiplier".

The examiner, however, disagree. Sunter teaches the digital result 80 (see fig.5, feedback 80 is generated by a "Reference Frequency") and it reads on applicant's "frequency source", the output 42 and the Clock Source 14 is multiplied by the multiplexer 34, the Clock Source 14 of Sunter reads on applicant's "a second signal having an original frequency". Furthermore, the controller 32 of Sunter reads on applicant's controller 10 and the output 42 of Sunter reads on the output of controller 10 of applicant. Therefore, Sunter indeed teaches applicant's claimed limitation. In addition, applicant attention is directed to the rejection of claims 17, 23, and 27 above.

On page 8 of applicant's remarks, applicant argues that Sunter does not disclose "determining the original frequency"

In response, applicant's claimed limitation fails to further define what "determining the original frequency" is (see claim 17). Therefore, Sunter indeed teaches applicant's claimed limitation with the broadest reasonable interpretation. In addition, applicant attention is directed to the rejection of claim 17 above.

On page 8 of applicant's remarks, applicant argues that Sunter's multiplexer is not a multiplier.

The examiner, however, disagree. Sunter indeed teaches a multiplexer 34 is a multiplier (see fig.5, two inputs 14 and 42 into multiplexer 34 and only one output "PLL").

On page 8 of applicant's remarks, applicant argues that Sunter does not disclose the step of "utilizing the original frequency to determine a corrected multiplier value".

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The examiner, however, disagree. Sunter indeed teaches applicant's claimed limitation (see Sunter, column 4, line 62, "When the PLL output frequency is valid").

On page 10 of applicant's remarks, applicant argues that "there is nothing in Sunter which suggests or points to this invention".

In response, Sunter indeed teaches applicant's invention, In addition, applicant attention is directed to the rejection of claims 17, 19-24 and 27-32 above.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (703) 605-5164. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

ldg
01/20/05

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